



IFW

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applicant:

Giora AMITZUR et al

Serial No.: 10/537,913

Filed: December 6, 2005

For: SYSTEM FOR DETERMINING ENDOTHELIAL  
DEPENDENT VASOACTIVITY

Examiner: Not Yet Assigned

§  
§  
§  
§  
§  
§  
§  
§  
§  
§

Group Art Unit: 3762

Attorney

Docket: 30028

Mail Stop amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Enclosed is a PTO Form 1449 which lists citations which may be material to the patentability and examination of the above identified application. Also enclosed are copies of the references cited. These are submitted in compliance with the duty of disclosure defined in 37 CFR 1.56. The Examiner is requested to make these citations of official record in this application.

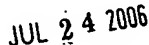
This Information Disclosure Statement under 37 CFR 1.56 is not to be construed as a representation that a search has been made, that additional matter which is material to the examination of this application does not exist, or that any or more of these citations constitutes prior art.

Respectfully submitted,

*Martin D. Moynihan*

Martin D. Moynihan  
Registration No. 40,338

Dated: July 20, 2006



Approved for use through 07/31/2006. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE  
ion of information unless it contains a valid OMB control number.

## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

**Complete if Known**

|       |   |    |   |
|-------|---|----|---|
| Sheet | 1 | of | 4 |
|-------|---|----|---|

## U.S. PATENT DOCUMENTS

| Examiner Initials* | Cite No. <sup>1</sup> | Foreign Patent Documents  | Publication Date<br>MM-DD-YYYY | Name of Patentee or<br>Applicant of Cited Document | Pages, Columns, Lines,<br>Where Relevant Passages<br>or Relevant Figures Appear |
|--------------------|-----------------------|---|--------------------------------|--|---|
|                    |                       | Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known) |                                |  |   |
|                    | 2                     | EP 1360929  | 11-12-2003                     | Chowienczyck et al.                                |   |
|                    | 3                     | PCT WO 02/34105   | 02-2-2002                      | Lavie et al.                                       |   |
|                    | 4                     | EP 1245183  | 02-2-2002                      | Ogura et al.                                       |   |
|                    | 5                     | EP 1053714  | 11-22-2000                     | Ogura et al.                                       |   |
|                    | 6                     | PCT WO 00/47110   | 08-17-2000                     | Orbach et al.                                      |   |
|                    |                       |   |                                |  |   |

<sup>1</sup>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of copy of this form with next communication to applicant. <sup>2</sup> Applicant's unique citation designation number (optional). <sup>3</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>4</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>5</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>6</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>7</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.

**SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450**

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

|   |                       |   |                     |                        |                |
|---|-----------------------|---|---------------------|------------------------|----------------|
| Substitute for form 1449A/PTO<br><br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br><i>(use as many sheets as necessary)</i> |                       | Complete if Known   |                     |                        |                |
|   |                       | Application Number  | 10/537,913          |                        |                |
|   |                       | Filing Date   | December 6, 2005    |                        |                |
|   |                       | First Named Inventor  | Giora AMITZUR et al |                        |                |
|   |                       | Group Art Unit  | 3762                |                        |                |
|   |                       | Examiner Name   | Not Yet Assigned    |                        |                |
| Sheet   | 2                     | Of  | 4                   | Attorney Docket Number | 30028          |
| OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS   |                       |   |                     |                        |                |
| Examiner Initials   | Cite No. <sup>1</sup> | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published. |                     |                        | T <sup>2</sup> |
|   | 7                     | Wilkinson et al. "Increased Augmentation Index and Systolic Stress in Type 1 Diabetes Mellitus", Q J Med., 93(7): 441-448, 2000. P.441-442.   |                     |                        |                |
|   | 8                     | Hartley et al. "Hemodynamics of Atherosclerotic Mice", Proceedings of the 22nd Annual EMBS International Conference, Chicago, Ill., IEEE, 3: 2219-2222, 2000. P.2219.   |                     |                        |                |
|   | 9                     | Itoh et al. "The Therapeutic Effect of Lipo PGE1 on Diabetic Neuropathy-Changes in Endothelin and Various Angiopathic Factors", Prostaglandins, 66(3): 221-234, 2001. Abstract, § '02.5!.   |                     |                        |                |
|   | 10                    | Anderson et al. "Flow-Mediated and Reflex Changes in Large Peripheral Artery Tone in Humans", Circulation, 79: 93-100, 1989.  |                     |                        |                |
|   | 11                    | Armentano et al. "Arterial Wall Mechanics in Conscious Dogs. Assessment of Viscous, Inertial, and Elastic Moduli to Characterize Aortic Wall Behavior", Circulation Research, 76: 468-478, 1995.  |                     |                        |                |
|   | 12                    | Brendle et al. "Effects of Exercise Rehabilitation on Endothelial Reactivity in Older Patients With Peripheral Arterial Disease", The American Journal of Cardiology, 87: 324-329, 2001.  |                     |                        |                |
|   | 13                    | Anderson et al. "Close Relation of Endothelial Function in the Human Coronary and Peripheral Circulations", JACC (Journal of the American College of Cardiology), 26(5): 1235-1241, 1995.   |                     |                        |                |
|   | 14                    | Corretti et al. "Guidelines for the Ultrasound Assessment of Endothelial-Dependent Flow-Mediated Vasodilation of the Brachial Artery", Journal of the American College of Cardiology, 39(2): 257-265, 2002.   |                     |                        |                |
|   | 15                    | Corretti et al. "Correlation of Cold Pressor and Flow-Mediated Brachial Artery Diameter Responses With the Presence of Coronary Artery Disease", American Journal of Cardiology, 75: 783-787, 1995.   |                     |                        |                |
|   | 16                    | Cosentino et al. "Endothelial Dysfunction in Diabetes Mellitus", Journal of Cardiovascular Pharmacology, 32(Suppl.3): S54-S61, 1998.  |                     |                        |                |
|   | 17                    | Cosentino et al. "High Glucose Causes Upregulation of Cyclooxygenases-2 and Alters Prostanoid Profile in Human Endothelial Cells. Role of Protein Kinase C and Reactive Oxygen Species", Circulation, 107: 1017-1023, 2003.                                   |                     |                        |                |
|   | 18                    | Celermajer et al. "Cigarette Smoking Is Associated With Dose-Related and Potentially Reversible Impairment of Endothelium-Dependent Dilation in Healthy Young Adults", Circulation, 88(Part 1): 2149-2155, 1993.  |                     |                        |                |
|   | 19                    | Celermajer et al. "Endothelium-Dependent Dilation in the Systemic Arteries of Asymptomatic Subjects Relates to Coronary Risk Factors and Their Interactions", JACC (Journal of the American College of Cardiology), 24: 1468-1474, 1994.                      |                     |                        |                |
|   | 20                    | Deanfield et al. "Silent Myocardial Ischaemia Due to Mental Stress", The Lancet, 2: 1001-1005, 1984.  |                     |                        |                |
|   | 21                    | Gage et al. "Vasoconstriction of Stenotic Coronary Arteries During Dynamic Exercise in Patients With Classic Angina Pectoris: Reversibility by Nitroglycerin", Circulation, 73: 865-876, 1986.  |                     |                        |                |

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>. Applicant's unique citation designation number (optional). <sup>2</sup>. Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.

SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

|   |   |    |   |                        |                     |
|---|---|----|---|------------------------|---------------------|
| Substitute for form 1449A/PTO<br><br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br><i>(use as many sheets as necessary)</i> |   |    |   | Complete if Known      |                     |
|   |   |    |   | Application Number     | 10/537,913          |
|   |   |    |   | Filing Date            | December 6, 2005    |
|   |   |    |   | First Named Inventor   | Giora AMITZUR et al |
|   |   |    |   | Group Art Unit         | 3762                |
|   |   |    |   | Examiner Name          | Not Yet Assigned    |
| Sheet   | 3 | Of | 4 | Attorney Docket Number | 30028               |

|  |    |  |  |
|--|----|--|--|
|  | 22 | Gordon et al. "Atherosclerosis Influences the Vasomotor Response of Epicardial Coronary Arteries to Exercise", Journal of Clinical Investigation, 83: 1946-1952, 1989.                                     |  |
|  | 23 | Hayano et al. "Decreased Magnitude of Heart Rate Spectral Components in Coronary Artery Disease. Its Relation to Angiographic Severity", Circulation, 81: 1217-1224, 1990.                                 |  |
|  | 24 | Wilkinson et al. "Nitric Oxide Regulates Local Arterial Distensibility In Vivo", Circulation, 105: 213-217, 2002.  |  |
|  | 25 | Egashira et al. "Reduction in Serum Cholesterol With Pravastatin Improves Endothelium-Dependent Coronary Vasomotion in Patients With Hypercholesterolemia", Circulation, 89: 2519-2524, 1994.              |  |
|  | 26 | Khoury et al. "Relation of Coronary Artery Disease to Atherosclerotic Disease in the Aorta, Carotid, and Femoral Arteries Evaluated by Ultrasound", American Journal of Cardiology, 80: 1429-1433, 1997.   |  |
|  | 27 | Malik et al. "Heart Rate Variability. Standards of Measurement, Physiological Interpretation, and Clinical Use", European Heart Journal, 17: 354-381, 1996.  |  |
|  | 28 | Nabel et al. "Dilation of Normal and Constriction of Atherosclerosis Coronary Arteries Caused by the Cold Pressor Test", Circulation, 77(1): 43-52, 1988.  |  |
|  | 29 | Nafz et al. "Endogenous Nitric Oxide Buffers Blood Pressure Variability Between 0.2 and 0.6 Hz in the Conscious Rat", American Journal of Physiology (Heart Circulation Physiology), 272: H632-H637, 1997. |  |
|  | 30 | Parati et al. "Spectral Analysis of Blood Pressure and Heart Rate Variability in Evaluating Cardiovascular Regulation. A Critical Appraisal", Hypertension, 25: 1276-1286, 1995.                           |  |
|  | 31 | Pelat et al. "Rosuvastatin Decreases Caveolin-1 and Improves Nitric Oxide-Dependent Heart Rate and Blood Pressure Variability in Apolipoprotein E-/- Mice In Vivo", Circulation, 107: 2480-2486, 2003.     |  |
|  | 32 | Persson "Spectrum Analysis of Cardiovascular Time Series", American Journal of Physiology - Regulatory, Integrative and Comparative Physiology, 273: 1201-1210, 1997.                                      |  |
|  | 33 | Perticone et al. "Prognostic Significance of Endothelial Dysfunction in Hypertensive Patients", Circulation, 104: 191-196, 2001.   |  |
|  | 34 | Joannides et al. "Nitric Oxide Is Responsible for Flow-Dependent Dilation of Human Peripheral Conduit Arteries In Vivo", Circulation, 91: 1314-1319, 1995.   |  |
|  | 35 | Sorensen et al. "Atherosclerosis in the Human Brachial Artery", JACC (Journal of the American College of Cardiology), 29(2): 318-322, 1997.  |  |
|  | 36 | Stadler et al. "Measurement of the Time Course of Peripheral Vasoactivity: Results in Cigarette Smokers", Atherosclerosis, 138: 197-205, 1998.   |  |
|  | 37 | Vanhoutte "Endothelial Dysfunction and Atherosclerosis", European Heart Journal, 18(Suppl.E): E19-E29, 1997.   |  |

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>. Applicant's unique citation designation number (optional). <sup>2</sup>. Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.

SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

|   |    |   |   |                          |                     |
|---|----|---|---|--------------------------|---------------------|
| Substitute for form 1449A/PTO<br><br><b>INFORMATION DISCLOSURE<br/>STATEMENT BY APPLICANT</b><br><br><i>(use as many sheets as necessary)</i> |    |   |   | <b>Complete if Known</b> |                     |
|   |    |   |   | Application Number       | 10/537,913          |
|   |    |   |   | Filing Date              | December 6, 2005    |
|   |    |   |   | First Named Inventor     | Giora AMITZUR et al |
|   |    |   |   | Group Art Unit           | 3762                |
|   |    |   |   | Examiner Name            | Not Yet Assigned    |
| Sheet   | 4  | Of  | 4 | Attorney Docket Number   | 30028               |
|   | 38 | Vita et al. "Patients With Evidence of Coronary Endothelial Dysfunction as Assessed by Acetylcholine Infusion Demonstrate Marked Increase in Sensitivity to Constrictor Effects of Catecholamines", Circulation, 85: 1390-1397, 1992. |   |                          |                     |
|   | 39 | Vogel et al. "Changes in Flow-Mediated Brachial Artery Vasoactivity With Lowering of Desirable Cholesterol Levels in Healthy Middle-Aged Men", American Journal of Cardiology, 77: 37-40, 1996.                                       |   |                          |                     |
|   | 40 | Vogel "Coronary Risk Factors, Endothelial Function, and Atherosclerosis: A Review", Clinical Cardiology, 20: 426-432, 1997.   |   |                          |                     |
|   | 41 | Widlansky et al. "The Clinical Implications of Endothelial Dysfunction", Journal of the American College of Cardiology, 42(7): 1149-1160, 2003.   |   |                          |                     |
|   | 42 | Zeiher et al. "Coronary Vasomotion in Response to Sympathetic Stimulation in Humans: Importance of the Functional Integrity of the Endothelium", JACC (Journal of the American College of Cardiology), 14(5): 1181-1190, 1989.        |   |                          |                     |
|   |    |   |   |                          |                     |
| Signature   |    |   |   | Considered               |                     |

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup>. Applicant's unique citation designation number (optional). <sup>2</sup>. Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.

SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450. If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2